

Remarks

The Examiner has rejected claim 1 under 35 U.S.C. 112 second paragraph as being indefinite. In addition, claims 1, 2, 3 and 10 have been rejected as being anticipated by Rivera et al, U.S. Patent 6,095,288, claims 4-6 have been rejected as unpatentable over the combination of Rivera et al '288 in view of Halpern, British publication 2 139 183, and claims 4-9 and 14 have been rejected as unpatentable over the combination of Rivera et al '288 in view of Ericson et al, U.S. Patent 5,564,529. Applicants respond to the rejections as follows.

With respect to the rejection of claim 1 under 35 U.S.C. 112, Applicants have amended the claim to remove the referenced language. Claim 2 has been amended to include substitute language. The following is offered by way of clarification: The floor depth of the lift cage is defined as the thickness of the lift cage as measured between the cage floor surface and the deepest point of the lift cage. See, Specification page 2, lines 1-3. Thus, the total floor depth may include both the thickness of the floor member as well as supporting frame members which extend downwardly below the floor member and add to the overall floor depth. Conventional elevator structures, in particular, have a lift cage floor depth which is significant, as the cage frames have substantial support members which contribute to the overall depth. In the present invention, the entire floor depth of the lift cage is equal to the thickness of the floor member element. Claim 2 has been amended in response to the Examiner's concerns to state that relationship in alternative terms, namely that the lift cage does not have any components extending below the lower surface of the floor member.

With respect to the rejection of the claims on art, Applicants have amended claims 1 and 14 to restate the invention in language that more clearly distinguishes the invention from the cited art. Independent claim 10, not amended, is believed to be distinguishable from the art as well. Thus, withdrawal of the rejections and passage to allowance of all claims is solicited.

With respect to claims 1, 2, and 3, as well as and all other claims dependent on claim 1, the three-dimensional body of the lift cage disclosed in Rivera et al is not "suspended" in a support body, but is laterally attached to an intermediary frame 16 which extends in a vertical

plane along one side of the three-dimensional body 12. As seen in Rivera et al Fig. 1, the elevator car 12 is cantilevered from the intermediary frame 16; the car 12 body requires considerable inherent stability in order to withstand bending moments resulting from the offset between the car's load center and its lateral attachment point to the intermediary frame. Claims 1 and 14 of the present invention recites that the three-dimensional body is suspended from the top of a support body formed by a pair of inverted U-shaped side frames joined by a top frame. Clearly, Rivera does not suspend its three-dimensional body from a top frame but mounts it along a side to an intermediary frame.

Figures 1 and 2 of Rivera et al do not disclose that the support body 16 comprises two side frames. Rivera et al '288 does not use side frames, but rather a pair of girders. Compare the frames 11, 12 of the present invention (Fig. 1) each of which has profile elements connected to form the frame, with the asserted side frame of Rivera et al '288 which, on the front and rear ends of the cage, comprises a single girder element. Rivera has at best, a single "frame" at the left side of the cage as shown in Rivera Fig. 1, as opposed to two side frames connected together by at least one top frame.

Further, with respect to claim 2, Rivera's cage or three-dimensional body 12 has a retractable toe guard 34 which extends below the lower surface of the floor member, and which is connected to the car by a member 36 (Rivera et al Fig. 4) which likewise projects downwardly below the floor member lower surface. Present claim 2 requires that there be no elements extending below the floor member lower surface.

With respect to independent claim 10, Rivera et al '288 discloses an elevator construction in which a lift shaft or hoistway 26 has a base 24. The floor plate of the building in which the elevator is mounted is not shown. The background of the invention, however, indicates that the construction proposed is for a pitless elevator system, applicable for both new and retrofit applications in existing structures. Thus, it is reasonable to assume that the hoistway structure 26 is placed upon the lowest story floor. That being the case, the underside of the lift shaft base 24 sits upon the top surface of the building floor plate, rather than lying at the same level as an underside of the floor plate as recited by claim 10. Accordingly, the upper surface of the lift shaft base 24 in Rivera '288 must necessarily lie above the upper side of the building floor plate, rather than being below the upper side of the building floor plate as

recited in present claim 10. The construction of claim 10 is feasible only where the floor depth of the lift cage is minimal, such as results when no components extend below the lower surface of the floor member. The Rivera et al '288 construction neither teaches nor suggests the relationship between the positioning and thickness of the lift shaft base and the building floor plate as recited in claim 10.

Independent claim 14, rejected as obvious over Rivera et al '288 in combination with Ericson et al '529, requires installation of an inverted U-shaped frame and suspending the cage to the top frame. The lack of applicability of Rivera et al '288 has been discussed above, while Ericson et al '529 does not cure the deficiency of Rivera et al as it relies upon a lower plank beam 36, below the floor member, to support the cage construction, along with braces 44. Further, no side frames are provided; the structures that the Examiner identifies as structural members are door frame supports (See col. 5, lines 5) and thus do not function as do the side frames of the present invention. There is neither teaching nor suggestion in Rivera et al '288 and/or Ericson et al '529 to either have the combination of a lift cage and an inverted U-shaped frame or to mount the lift cage by assembling the inverted U-shaped frame and attaching the cage to a top frame member in a suspended manner as recited by claim 14.

With respect to the remaining claims asserted as being obvious over the combination of Rivera et al '288 and either Halpern GB '183 or Ericson et al '529, neither of the secondary references cure the basic defect of Rivera '288's lack of teaching or suggestion of the inverted U-shaped frame from the top of which is suspended a three-dimensional person receiving body. Accordingly, all claims are allowable over the references cited.

Reconsideration and withdrawal of all rejections is accordingly requested.

Respectfully submitted,

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